Amendments to the Specification:

Please replace the paragraph starting on page 5 and continuing to page 6 that begins with "Figure 2 shows" with the following amended paragraph:

Figure 2 shows a temperature/time diagram wherein the temperature change is marked off as a function of the time. The average cardiac output is measured by one controlled injection for the duration of a respiration cycle and it is not necessary to carry out a number of measurements. In the example of Figure 2 the period during which the change in the concentration is recorded is indicated T1. This period runs from t~~6~~=4 to t~~6~~=12.

Please replace the paragraph starting on page 6 and continuing to page 7 that begins with "Research has shown" with the following amended paragraph:

Research has shown that it is not possible to achieve accurate measuring results in this manner, since the pulsating cardiac output fluctuates due to the natural respiration or artificial respiration via a ventilator. This is schematically shown in Figure 2. In this case the temperature change also includes a temperature variation which is not caused by the injection. This influence on the respiration can be removed by measuring the area below the measured temperature curve over a period of exactly one respiration cycle, preferably directly prior to the injection of the cold fluid. In the embodiment as shown in Figure 2 injection takes place at t=4, and consequently area A defined by the points a,b,c,d is measured first for the duration of period T2. The determination of area B under the temperature curve defined by the points c,d,g,h,is started at the time of injection t=4, and lasts over a period of a number n of respiration cycles until t=12. The area resulting from the injection of the cold fluid will then be
Area-Dil = B - n x A.

Please replace the paragraph on page 7 that begins with "The influence of slow temperature drift" with the following amended paragraph:

The influence of slow temperature drift resulting from an increase or decrease of the body temperature, for example, can furthermore be eliminated by measuring the temperature change over a period of exactly one respiration cycle directly prior to as well as directly contiguous to the injection. This situation is shown in Figure 3. Both area A and area C (defined by the points g,h,i,j) are thereby measured over period T2 and over period T3, respectively, so that the area resulting from the injection of the cold fluid will then be Area-Dil = B - n/2 x (A + C).